

OCEAN GALES AND STORMS, OCTOBER 1935—Continued

Vessel	Voyage		Position at time of lowest barometer		Gale began October	Time of lowest barometer October	Gale ended October	Lowest barometer	Direction of wind when gale began	Direction and force of wind at time of lowest barometer	Direction of wind when gale ended	Direction and highest force of wind	Shifts of wind near time of lowest barometer
	From—	To—	Latitude	Longitude									
NORTH ATLANTIC OCEAN—Continued													
Boston City, Br. S. S.	Halifax	Cardiff	45 45 N.	55 45 W.	16	3p, 16	17	29.56	N	NE, 9	N	NE, 10	NE-NNE.
San Bruno, Pan. S. S.	Cristobal	Charleston	21 42 N.	74 17 W.	17	4p, 17	18	29.87	NE	ENE, 5	NE	ENE, 7	NE-ENE-NE.
Europa, Ger. S. S.	New York	Cherbourg	38 18 N.	53 30 W.	17	Mdt, 17	18	29.51	N	N, 8	SE	N, 10	N-ESE.
Seatrail New York, Am. S. S.	New Orleans	Havana	25 10 N.	83 30 W.	17	4a, 18	17	29.95	E	E, 7	E	E, 8	
Helmstrath, Br. S. S.	Charleston	Liverpool	39 12 N.	51 40 W.	16	10a, 18	18	29.59	E	SE, 6	S	NE, 11	NE-S-SE.
Exochorda, Am. S. S.	New York	Gibraltar	39 43 N.	56 48 W.	17	3p, 18	18	29.54	NNE	SE, 8	SE	NE, 9	NE-SE.
Pres. Harding, Am. S. S.	do	Cobb	41 17 N.	58 10 W.	18	5p, 18	18	29.53	NE	E, 10	SE	NE, 10	NE-SE.
Amapala, Hond. S. S.	Pt. Cabezas	New Orleans	20 00 N.	85 30 W.	18	6p, 18	19	29.80	E	E, 6	E	E, 7	None.
Gulfqueen, Am. S. S.	Providence	Port Arthur	24 25 N.	81 50 W.	17	7p, 18	17	30.02	ENE	E, 6	ENE	ENE, 8	ENE-E.
Circe Shell, Br. M. S.	Houston	Montreal	24 16 N.	81 45 W.	18	7a, 19	18	30.03	E	E, 5	E	E, 8	None.
Black Heron, Am. S. S.	New York	Antwerp	43 10 N.	56 20 W.	18	2p, 19	19	29.14	ESE	SE, 9	SW	SE, 9	SE-W.
Forbes Hauptman, Am. S. S.	Norfolk	Colon	13 28 N.	77 46 W.	17	4p, 19	20	29.64	NE	SW, 6	SSW	SSW, 9	SW-SSW.
Boston City, Br. S. S.	Halifax	Cardiff	50 57 N.	31 02 W.	22	5a, 22	23	29.64	WNW	WNW, 5	NW	NW, 10	SW-NW-WNW
Afel, Am. S. S.	Victoria, Brazil	New Orleans	17 45 N.	80 25 W.	23	6a, 24	26	29.18	WSW	Calm	NE	SE, 9	SW-Calm-SE.
Jamaica Producer, Br. S. S.	London	Kingston	20 24 N.	71 48 W.	22	7a, 24	23	29.80	ESE	E, 2	ESE	ESE, 6	
New Brunswick, Br. S. S.	Conakry	Boston	35 32 N.	62 56 W.	25	2a, 25	25	29.87	N	N, 6	NNW	N, 8	SW-N.
Sinaloa, Hond. S. S.	New Orleans	Bluefields	14 55 N.	83 17 W.	24	4a, 25	25	29.50	NE	W, 7	SW	W, 7	N-W.
Contessa, Hond. S. S.	Colon	La Ceiba	15 16 N.	83 22 W.	25	do	26	29.37	NW	NNW, 9	WNW	NNW, 9	NW-NNE.
Tercero, Nor. M. S.	New York	Three Rivers	48 40 N.	63 30 W.	26	4a, 26	27	29.31	WSW	WSW, 8	W	NNW, 10	SW-WSW-NW.
City of Baltimore, Am. S. S.	Havre	Norfolk	45 10 N.	42 28 W.	26	8p, 26	26	29.52	S	W, 3	SW	S, 10	S-W-NW.
Montreal City, Br. S. S.	Bristol	Philadelphia	50 56 N.	31 21 W.	26	4a, 27	27	29.71	SSW	S, 9	SW	S, 9	S-SW.
Georgia, Dan. S. S.	Newcastle	New York	55 51 N.	29 50 W.	28	10a, 30	*1	29.28	W	NW, 8	NW	NNW, 11	
American Shipper, Am. S. S.	Belfast	Boston	53 20 N.	28 00 W.	29	7p, 30	31	29.23	W	NW, 9	NW	NW, 9	WNW-NW.
Queen of Bermuda, Br. S. S.	New York	Bermuda	33 00 N.	65 10 W.	30	1a, 31	31	29.53	N	WSW, 8	SSW	WSW, 8	NNE-WSW-S.
Montreal City, Br. S. S.	Bristol	Philadelphia	48 43 N.	43 25 W.	29	6a, 31	31	30.15	WSW	NW, 9	NW	NW, 9	N-NW.
Black Gull, Am. S. S.	Rotterdam	New York	49 58 N.	37 00 W.	29	8a, 31	31	29.72	WSW	NW, 8	NNW	NW, 9	NNW-NW.
Henri Jasper, Belg. S. S.	Antwerp	do	50 35 N.	32 45 W.	29	—, 31	*2	29.40	SW	NW, 10	NW	NNW, 10	NW-NNW.
NORTH PACIFIC OCEAN													
Tsuyama Maru, Jap. S. S.	Los Angeles	Yokohama	39 32 N.	157 25 E.	1	Noon, 1	1	29.38	SSW	W, 8	NW	W, 9	SSW-W-NW.
Steelmaker, Am. S. S.	do	Balboa	14 02 N.	95 45 W.	1	4a, 2	2	29.85	NE	NE, 8	NE	NE, 8	None.
Kyokuto Maru, Jap. M. S.	Yokohama	Los Angeles	41 30 N.	172 20 E.	2	2p, 2	2	29.30	SW	WSW, 8	WSW	WSW, 8	SW-WSW.
Jeff Davis, Am. M. S.	Honolulu	Manila	12 38 N.	126 40 E.	3	1p, 3	4	29.57	NNW	W, 9	W	W, 9	NW-W.
Pennsylvania, Am. S. S.	Cebu	San Francisco	25 30 N.	145 25 E.	5	3p, 5	5	29.52	NE	NE, 8	NE	NE, 8	NE-E.
Chester, U. S. N.	Honolulu	Yokohama	24 52 N.	164 46 W.	6	Noon, 6	6	29.91	NE	NE, 7	NE	NE, 8	ENE-NE.
Pres. Jefferson, Am. S. S.	Yokohama	Victoria, B. C.	43 10 N.	156 36 E.	8	4a, 8	9	29.04	W	N, 5	W	W, 10	E-NW.
Asia, Dan. M. S.	Ocean Falls	Yokohama	45 27 N.	158 52 E.	8	6a, 8	8	29.17	NW	NE, 7	W	W, 10	ENE-NE-NW
Bellingham, Am. S. S.	Taku Bar	Vancouver	49 44 N.	176 24 E.	8	10p, 8	9	29.30	SSW	S, 10	WSW	S, 10	S-SW.
Anna Maersk, Dan. M. S.	Balboa	Los Angeles	14 42 N.	96 14 W.	8	6a, 9	9	29.77	WNW	Shift, 8	ENE	NNE, 8	NNE-ENE.
General Sherman, Am. S. S.	Yokohama	San Francisco	45 02 N.	174 12 W.	12	4a, 13	13	29.81	SSE	S, 8	SSW	S, 9	S-SSW.
Pres. Jefferson, Am. S. S.	do	Victoria, B. C.	49 42 N.	136 30 W.	11	3a, 14	13	29.69	NW	NW, 6	NW	NW, 9	None.
Diamond Head, Am. S. S.	Bellingham	Honolulu	43 32 N.	133 59 W.	13	8p, 13	14	29.68	W	WSW, 6	W	W, 9	SW-W.
Pres. Grant, Am. S. S.	Seattle	Yokohama	49 30 N.	129 00 W.	17	2p, 17	17	29.75	SSW	W, 9	W	SSW, 9	SSW-W.
Tantalus, Br. M. S.	Yokohama	Vancouver	42 47 N.	154 53 E.	18	4a, 19	19	29.63	E	SE, 9	SE	SE, 9	None.
General Sherman, Am. S. S.	do	San Francisco	35 03 N.	123 12 W.	19	8a, 20	20	30.04	NNW	NNW, 8	NNW	NNW, 8	
Soyo Maru, Jap. M. S.	do	Los Angeles	44 24 N.	148 39 W.	20	8a, 21	20	29.93	E	SSW, 7	SE	E, 9	SE-SSW.
Shelton, Am. S. S.	Sagay	do	41 06 N.	169 40 W.	21	4a, 22	25	29.29	NNE	N, 2	NNE	N, 9	W-N-NNE.
Takooka Maru, Jap. S. S.	Yokohama	Honolulu	34 20 N.	156 45 E.	24	4a, 25	28	29.28	ENE	S, 9	W	—, 10	E-S-WSW.
Forbes Hauptman, Am. S. S.	Balboa	Los Angeles	15 06 N.	95 52 W.	25	2p, 26	26	29.68	NW	NNW, 10	NNE	NNW, 10	NNW-NNE.
Empress of Asia, Br. S. S.	Vancouver	Yokohama	47 43 N.	163 00 E.	27	4a, 27	27	29.33	N	N, 8	NNW	N, 9	NE-N.
Californian, Am. M. S.	Balboa	Los Angeles	14 07 N.	93 12 W.	27	do	27	29.64	NW	NW, 5	NNE	N, 8	WNW-NNW.
Hikawa Maru, Jap. M. S.	Yokohama	Vancouver	47 56 N.	176 40 E.	26	10a, 27	29	28.45	NE	SSW, 9	SE	SSW, 9	SE-SSW-S.
Yeiyo Maru, Jap. S. S.	Maizuru	San Francisco	41 37 N.	141 00 E.	27	8a, 28	28	29.43	E	E, 8	SSE	E, 8	E-SSE.
Golden Mountain, Am. S. S.	Tandoc	do	38 12 N.	160 15 W.	27	7p, 29	29	29.78	E	W, 2	E	E, 10	E-W.
Shelton, Am. S. S.	Sagay	Los Angeles	37 30 N.	149 55 W.	28	4p, 27	30	29.72	E	ESE, 6	SE	E, 10	ENE-ESE-E.
Pres. Jackson, Am. S. S.	Yokohama	Victoria	49 50 N.	136 00 W.	28	2a, 29	29	29.92	NNW	NNW, 7	NNW	NNW, 10	NNW-ENE.

1 Position approximate.

* November.

NORTH PACIFIC OCEAN, OCTOBER 1935

By WILLIS E. HURD

Atmospheric pressure.—The outstanding feature of the pressure situation over the North Pacific Ocean during October 1935 was the high barometer throughout the Aleutian and adjacent regions. At Dutch Harbor, pressure was higher than 30 inches on 20 days of the month. The average pressure at this station, 30.09 inches, was 0.44 inch above the normal, which figure is by far the highest October average in many years of record. A similar statement holds true of St. Paul and

Kodiak, with departures from the normal of +0.42 and +0.36, respectively. Plus departures of less values occurred far to the southward along the American coast.

As an average condition, no Aleutian low was existent this month. Such average oceanic depression as occurred in the extra-tropics lay to the southward of the Aleutians, along the western half of the northern steamship routes.

The barometric situation in the Tropics was practically normal, except for a departure of -0.06 at Honolulu, and of +0.07 at Naha, in the Nansei Islands, where the effect of the Asiatic anticyclone was felt more strongly than usual for the season.

TABLE 1.—Averages, departures, and extremes of atmospheric pressure at sea level, North Pacific Ocean, October 1935, at selected stations

Station	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	<i>Inches</i>	<i>Inch</i>	<i>Inches</i>		<i>Inches</i>	
Point Barrow	29.84	-0.09	30.44	5	29.42	2
Dutch Harbor	30.09	+ .42	30.64	25	28.88	1
St. Paul	30.05	+ .42	30.60	19, 20	29.04	1
Kodiak	29.95	+ .36	30.76	27	28.94	16
Juneau	30.01	+ .14	30.76	28	29.28	22
Tatoosh Island	30.10	+ .09	30.61	22	29.56	14
San Francisco	30.04	+ .03	30.29	17	29.77	28
Mazatlan	29.84	0	29.90	{ 7, 10, 12, 24, 25 }	29.76	28
Honolulu	29.94	- .06	30.04	22	29.78	27
Midway Island	30.03	0	30.18	6	29.84	8, 9
Guam	29.80	- .04	29.90	7	29.72	3
Manila	29.81	+ .01	29.88	27	29.72	3
Hong Kong	29.90		30.01	9, 31	29.74	6
Naha	29.97	+ .07	30.14	8	29.74	25
Chichishima	29.94	+ .03	30.12	7, 8	29.60	5
Nemuro	29.98		30.32	25	29.44	18

NOTE.—Data based on 1 daily observation only, except those for Juneau, Tatoosh Island, San Francisco, and Honolulu, which are based on 2 observations. Departures are computed from best available normals related to time of observation.

Cyclones and gales.—October was somewhat stormier than the preceding September along the greater extent of the ocean area north of the thirty-fifth parallel. Gales were fairly well distributed on from 1 to 3 or more days in each 5° ocean square, but with greatest frequency as a rule to the southward of the central Aleutians. There were no winds reported in excess of force 10. Gales of this higher strength were experienced by the American steamships *President Jefferson* and *Bellingham* to the southeast of the Kuril Islands, and by the Danish motorship *Asia*, near 50° N., 176° E., on the 8th; by the Japanese steamship *Takaoka Maru*, near 34° N., 157° E., on the 25th; and by the American steamships *Shelton*, *Golden Mountain*, and *President Jackson* in scattered localities between 35° and 50° N., 138° and 160° W., on the 28th.

The storm field of the 8th was of wide extent between the Kurils and the central Aleutians and southward, with lowest reported pressure of 28.90 inches. There was then a rapid progression of the cyclone northward, out of the steamship lanes; and on the 9th it was central over the northern reaches of the Bering Sea, proceeding toward the Arctic Ocean.

During the 11th to 13th, scattered gales of force 8–9 occurred over a great region east of the one hundred and eightieth meridian and mostly to the northward of the forty-fifth parallel.

On the 24th to 26th, gales of force 8–10 were met between 30° and 35° N., 150° and 170° E.

On the 25th to 27th, the deepest disturbance of the month lay between the central Aleutians and latitude 40° N. Pressures well below 29 inches were widespread in that region, on the 27th especially, with the lowest barometer, 28.45, read on the Japanese motorship *Hikawa Maru* near 48° N., 177° E. No gales in excess of force 9, however, were reported from this deep disturbance.

During the period October 21 to 28 a low fluctuated over the general region between about 30° and 45° N., 180° and 145° W. It caused moderate to strong local gales within the area up to the 28th, on which date winds of force 10 occurred in several localities.

Near the American coast gales were reported as follows: On the 17th, of force 9, west of Vancouver Island; on the 20th, of force 8, off central California.

Typhoons.—Four typhoons, described in the subjoined report by the Rev. Bernard F. Doucette, S. J., of the Central Observatory, Manila, occurred in the Far East during the month. Of these typhoons, that of October 3–7, which the writer refers to as passing the one hundred and fiftieth meridian on the 7th, apparently continued

northeastward and then northward to the Arctic Ocean, and caused the gales, noted above, over the western part of the northern steamship lanes on the 8th.

Tehuantepecers.—Gales of the norther type were reported in the Gulf of Tehuantepec, as follows: Of force 8 on the 2d, 9th, and 27th; and of force 10 on the 26th.

Fog.—The greater part of the ocean fog of the month occurred during the first decade. On the northwestern part of the ocean it was observed on the 4th to 10th. In higher latitudes east of the one hundred and eightieth meridian, except on the immediate coast, it was observed on 5 days. In Washington and Oregon waters fog was reported on 3 days; in California waters, on 5 days; in Lower California waters, on 5 days.

TYPHOONS OVER THE FAR EAST, OCTOBER 1935

By BERNARD F. DOUCETTE, S. J.

[Weather Bureau, Manila, P. I.]

During the first half of the month, four typhoons appeared and affected the weather of the Far East. Brief accounts of these disturbances follow.

Typhoon, October 1 and 2.—A depression appeared October 1 south of the Paracels and moved west-northwest into Indochina. When in the continent, it intensified sufficiently to be classified as a typhoon.

Typhoon, October 1 to 8.—About 300 miles east of Samar, a depression formed October 1 and moved northwest. It quickly intensified into a typhoon, inclining to the west-northwest, approaching central Luzon. Shifting to the northwest when near Polillo Island, it passed close to and south of Baler, Tayabas Pr., crossed Luzon on the 4th–5th and passed into the China Sea, moving between Dagupan and Baguio. It continued on the northwest course until about 120 miles southwest of Pratas when it inclined to the west. On October 8, at 2 p. m., it was over the northern part of the Gulf of Tong King moving west-northwest into the continent.

Observations from the motor vessel *Jeff Davis* were of great assistance in locating and plotting the course of this typhoon as it approached the archipelago. The lowest barometric reading reported was that from Baler, Tayabas. At 9 p. m., October 4 a pressure of 740.07 mm (29.136 inches) was recorded with north-northeast winds of force 12. The loss of life was 18, as reported to the newspapers on October 8. Destruction to crops, light material houses, and roads occurred over a narrow path, as the destructive winds did not extend to a great distance from the center. Compared with other typhoons, little rain was reported as this typhoon passed.

Typhoon, October 3 to 7.—This typhoon was one of the distant ocean typhoons, far from the Philippines. It first manifested itself about 360 miles east-northeast of Guam moving northwest, October 3, at 6 a. m. After proceeding about 180 miles, it slowed up, moving 60 miles during October 4, inclining more to the north-northwest. It then moved very fast, passing to the east of the Bonins, on the 6th as it began to recurve to the north-northeast. October 7, afternoon, it passed the one hundred and fiftieth meridian, moving north-northeast.

Observations from the ships, *Comliebank*, *Brightvega*, *Elg*, *Pennsylvania*, and *Stentor* were of great assistance in locating this typhoon on October 5 and 6.

Typhoon, October 7 to 13.—A depression formed about 120 miles west-southwest of Yap on the 7th, and moved westward, gradually inclining to the west by north and then west-northwest, crossing the Visayan Islands. It moved into the China Sea October 11, still a depression. When it reached the Paracels, it shifted its course to the west and intensified into a typhoon as it entered Indochina.